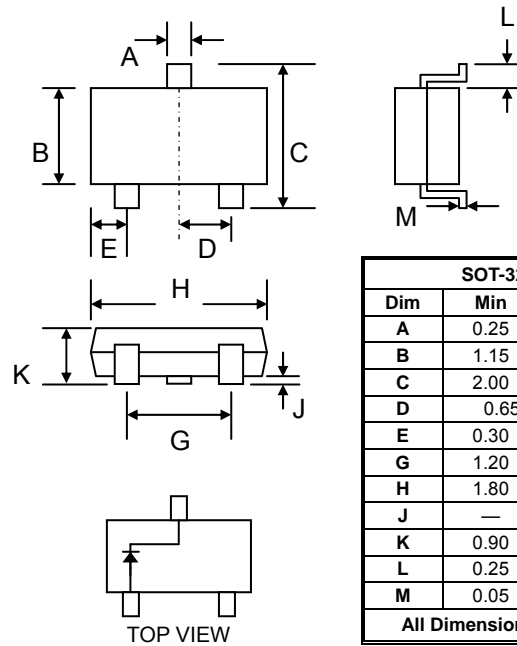


Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.40
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	—	0.10
K	0.90	1.10
L	0.25	—
M	0.05	0.15
All Dimensions in mm		

Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	V_{RWM} V_R	100	150	200	V
Forward Continuous Current	I_F	200			mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	2.5 0.5			A
	@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$				
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150			$^\circ\text{C}$

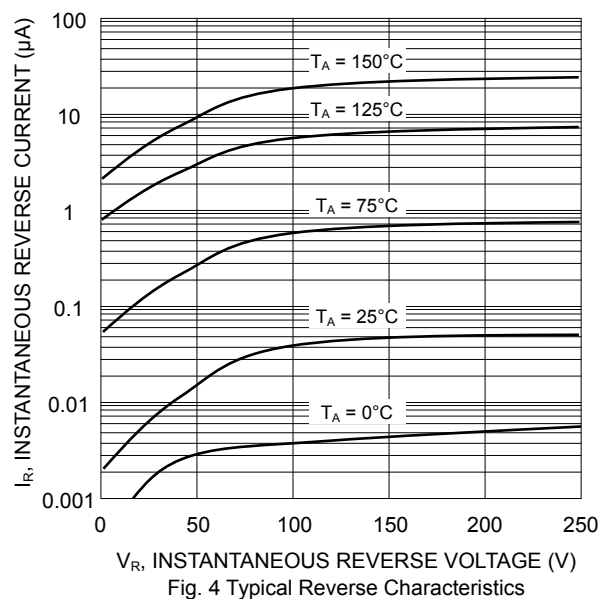
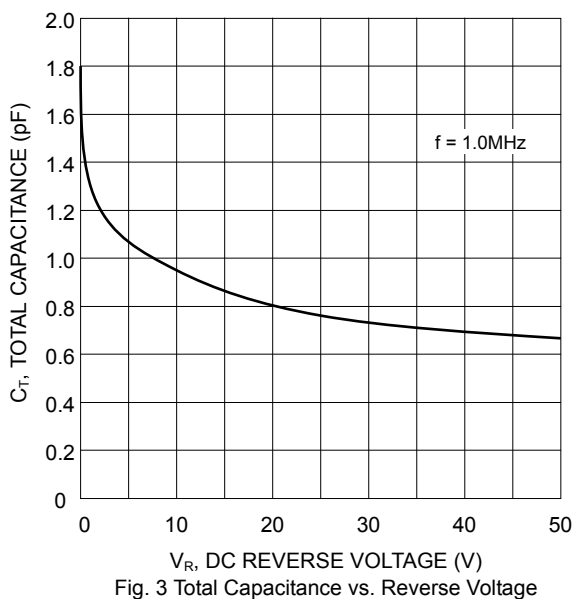
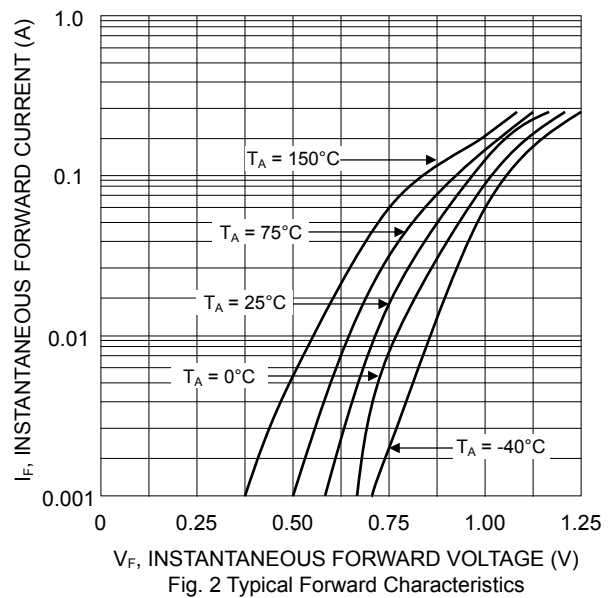
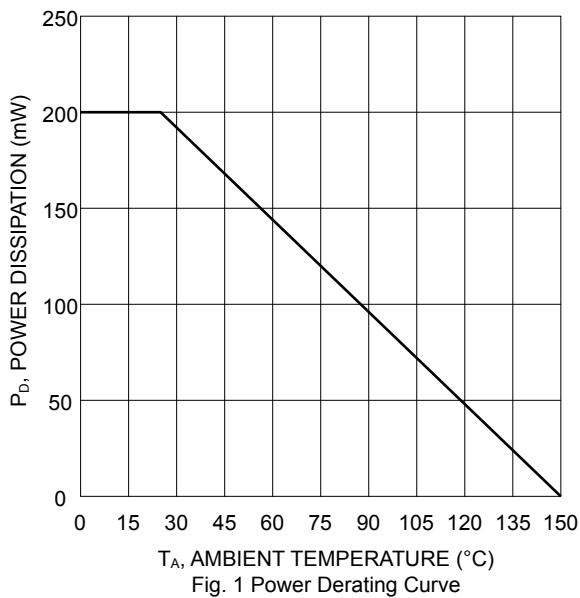
Thermal Characteristics

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Unit
Power Dissipation (Note 1)	P_D	200			mW
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	625			$^\circ\text{C/W}$

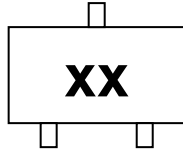
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Unit
Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$	$V_{(BR)}$	120	200	250	V
Forward Voltage Drop @ $I_F = 100\text{mA}$ @ $I_F = 200\text{mA}$	V_{FM}		1.0 1.25		V
Peak Reverse Leakage Current @ Rated V_R , $T_J = 25^\circ\text{C}$ @ Rated V_R , $T_J = 150^\circ\text{C}$	I_{RM}		100 100		nA μA
Diode Capacitance ($V_R = 0\text{V}$, $f = 1.0\text{MHz}$)	C_D		5.0		pF
Reverse Recovery Time ($I_F = I_R = 30\text{mA}$, $I_{RR} = 0.1 \times I_R$, $R_L = 100\Omega$)	t_{rr}		50		nS



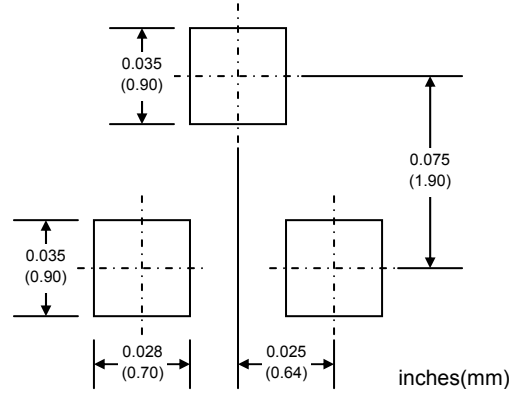
MARKING INFORMATION



xx = Device Code, See Table Below

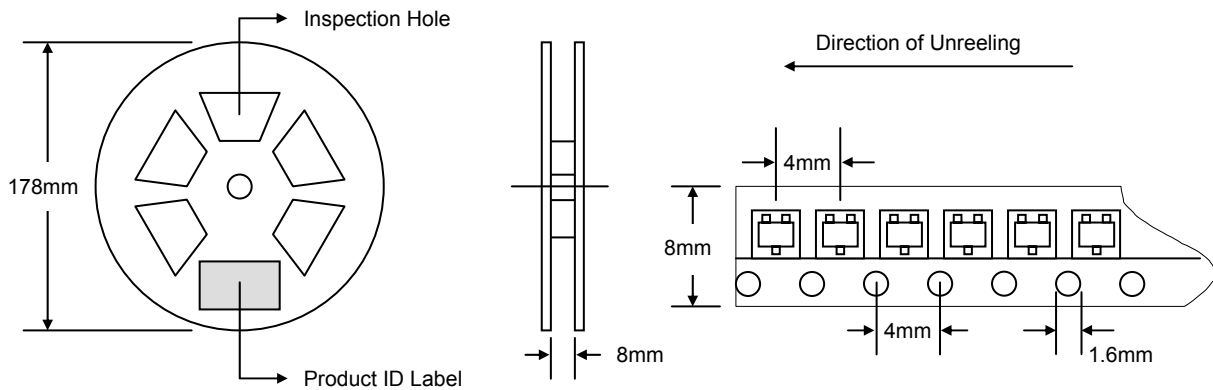
Mfg Site	BAS19W	BAS20W	BAS21W
TW Plant	A8	A80	A82
CN Plant	KA8	KT2	KT3

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL




Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BAS19W-T1	SOT-323	3000/Tape & Reel
BAS20W-T1	SOT-323	3000/Tape & Reel
BAS21W-T1	SOT-323	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAS19W-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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